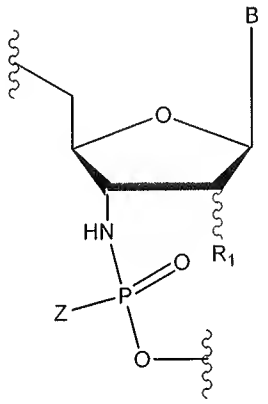
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-41. (Cancelled)

42. (Currently amended) An isolated small interfering RNA (siRNA) comprising 15-25 nucleotides complementary to a target nucleic acid sequence, wherein the RNA comprises at least one nucleotide of formula:



wherein R_1 is chosen from fluorine and OR_2, R_2 is chosen from hydrogen and lower alkyl, B is chosen from purines, pyrimidines, and analogs thereof, and Z is sulfur ~~at least one internucleoside linkage chosen from ribo N3'→P5' phosphoramidate (NP) and ribo N3'→P5' thiophosphoramidate (NPS) linkages~~.

43. (Currently amended) The small interfering RNA according to Claim 42, wherein all of the internucleoside linkages are ~~chosen from ribo N3'→P5' phosphoramidate (NP) and~~ ribo N3'→P5' thiophosphoramidate (NPS) linkages.

44. (Previously presented) The small interfering RNA according to Claim 42, wherein said small interfering RNA is in a form chosen from the single-stranded form comprising the antisense strand, and the double-stranded form comprising both sense and antisense strands.

45. (Previously presented) The small interfering RNA according to Claim 42, wherein the RNA further comprises at least one covalently conjugated lipid moiety.

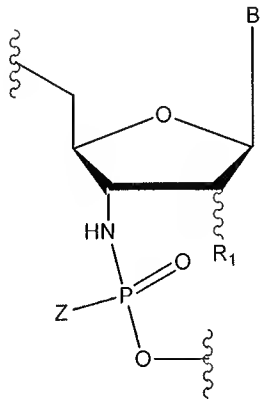
46. (Previously presented) The small interfering RNA according to Claim 45, whercin one lipid moiety is covalently conjugated to the 5' or 3' terminus of the RNA, and the lipid moiety is chosen from fatty acids, sterols and hydrocarbons.

47. (Currently amended) The small interfering RNA according to claim 45, comprising the structure:

$$O\text{-}(x\text{-}L)_n$$

wherein

- O is an oligonucleotide of formula:



wherein R_1 is chosen from fluorine and OR_2, R_2 is chosen from hydrogen and lower alkyl, B is chosen from purines, pyrimidines, and analogs thereof, and Z is ~~chosen from oxygen and~~ sulfur, and further wherein the oligonucleotide comprises a sequence of 15 to 25 bases, and said sequence is at least partially complementary to a selected target sequence;

-L is a lipid moiety;

-x is an optional linker; and

- n is an integer ranging from 1 to 5, wherein if n>1, each additional (x-L) component may be, independently, the same or different.

48. (Previously presented) The small interfering RNA according to Claim 47, wherein L is a lipid chosen from substituted and unsubstituted fatty acids and sterols; or wherein L is chosen from substituted and unsubstituted hydrocarbons.

49. (Previously presented) The small interfering RNA according to claim 48, wherein L is chosen from fatty acids substituted with at least one fluorine; or wherein L is chosen from hydrocarbons substituted with at least one fluorine.

50. (Currently amended) The small interfering RNA according to claim 42 [[47]], wherein at least 60% of the nucleobases in the oligonucleotide are ribonucleobases.

51. (Currently amended) The small interfering RNA according to Claim 44 [[47]], wherein said small interfering RNA is an antisense strand.

52. *(Withdrawn) A method for effecting the post-transcriptional silencing of at least one gene, comprising administering to a mammal in need of such post-transcriptional silencing at least one small interfering RNA comprising 15-25 nucleotides complementary to a target nucleic acid sequence, wherein the RNA comprises at least one internucleoside linkage chosen from ribo-N3'→P5' phosphoramidate (NP) and ribo N3'→P5' thiophosphoramidate (NPS) linkages.*

53. *(Withdrawn) The method of Claim 52, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

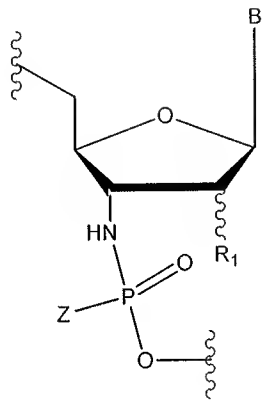
54. *(Withdrawn) The method of Claim 52, wherein the at least one gene encodes at least one mRNA chosen from cellular mRNAs and viral mRNAs; or wherein the at least one gene is an oncogene; or wherein the at least one gene is a viral gene.*

55. *(Withdrawn) A method for effecting the post-transcriptional silencing of at least one gene, comprising administering to a mammal in need of such post-transcriptional silencing at least one compound comprising the structure:*

O-$(x$-$L)_n$

wherein

-O is an oligonucleotide of formula:



wherein R_1 is chosen from fluorine and OR_2, R_2 is chosen from hydrogen and lower alkyl, B is chosen from purines, pyrimidines, and analogs thereof, and Z is chosen from oxygen and sulfur, and further wherein the oligonucleotide comprises a sequence of 15 to 25 bases, and said sequence is at least partially complementary to a selected target sequence;

-L is a lipid moiety;

-x is an optional linker; and

- n is an integer ranging from 1 to 5, wherein if n>1, each additional (x-L) component may be, independently, the same or different.

56. *(Withdrawn) The method according to claim 55, wherein the at least one gene encodes at least one mRNA chosen from cellular mRNAs and viral mRNAs; or wherein the at least one gene is an oncogene; or wherein the at least one gene is a viral gene.*

57. (Currently amended) The small interfering RNA according to Claim 42 [[44]], wherein said small interfering RNA is in single-stranded form, is at least 17 nucleotides in length,

comprises at least one ~~internucleoside linkage chosen from ribo N3'→P5' phosphoramidate (NP) and~~ ribo N3'→P5' thiophosphoramidate (NPS) linkage ~~linkages~~, and is effective to inhibit the expression of an endogenous mammalian target RNA sequence.

58. (Previously presented) The single-stranded small interfering RNA according to Claim 57, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.

59. (Previously presented) The single-stranded small interfering RNA according to Claim 57, wherein the target RNA sequence is encoded by a human gene.

60. (Currently amended) The small interfering RNA according to Claim 44, wherein said small interfering RNA is in double-stranded form, is at least 17 basepairs in length, comprises at least one ~~internucleoside linkage chosen from ribo N3'→P5' phosphoramidate (NP) and~~ ribo N3'→P5' thiophosphoramidate (NPS) linkage ~~linkages~~, and is effective to inhibit the expression of an endogenous mammalian target RNA sequence.

61. (Previously presented) The double-stranded small interfering RNA according to Claim 60, wherein the target RNA sequence is encoded by a human gene.

62. (Previously presented) The double-stranded small interfering RNA according to Claim 60, wherein the RNA further comprises at least one covalently conjugated lipid moiety.

63. (Previously presented) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence is a human immunodeficiency virus (HIV) gene, such that said siRNA modulates expression of said HIV gene.

64. (Previously presented) The small interfering RNA according to claim 63, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.

65. *(Withdrawn) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence is a beta site APP-cleaving enzyme (BACE) gene, such that said siRNA modulates expression of said BACE gene.*

66. *(Withdrawn) The small interfering RNA according to claim 65, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

67. *(Withdrawn) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence is an EGFR gene, such that said siRNA modulates expression of said EGFR gene.*

68. *(Withdrawn) The small interfering RNA according to claim 67, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

69. *(Withdrawn) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence encodes K-Ras, such that said siRNA modulates expression of said K-Ras.*

70. *(Withdrawn) The small interfering RNA according to claim 69, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

71. *(Withdrawn) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence is a prostaglandin D2 receptor (PTGDR) gene, such that said siRNA modulates expression of said PTGDR gene.*

72. *(Withdrawn) The small interfering RNA according to claim 71, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

73. *(Withdrawn) A small interfering RNA as recited in claim 42 wherein said target nucleic acid sequence is an ADORA1 gene, such that said siRNA modulates expression of said ADORA1 gene.*

74. *(Withdrawn) The small interfering RNA according to claim 73, wherein the small interfering RNA further comprises at least one covalently conjugated lipid moiety.*

75. (Previously presented) The compound according to Claim 47, wherein n = 1 and the x-L component is covalently conjugated to the 5' terminus of the oligonucleotide O.

76. (Previously presented) The compound according to Claim 47, wherein n = 1 and the (x-L) component is covalently conjugated to the 3' terminus of the oligonucleotide O.

77. (Previously presented) The compound according to Claim 47, wherein n = 2, one (x-L) component is covalently conjugated to the 5' terminus and one independently chosen (x-L) component is covalently conjugated to the 3' terminus.

78. (Currently amended) The compound according to Claim 42, wherein at least 80% of the internucleoside linkages are ~~chosen from ribo-N3'→P5' phosphoramidate and~~ ribo N3'→P5' thiophosphoramidate linkages.

79. (Currently amended) The compound according to Claim 42, wherein at least 60% of the internucleoside linkages are ~~chosen from ribo-N3'→P5' phosphoramidate and~~ ribo N3'→P5' thiophosphoramidate linkages.

80. (Previously presented) A composition comprising at least one small interfering RNA according to claim 42 in an amount effective to modulate the expression of at least one gene.